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AFRL forms CRADA with local firm on mankin research

by Tiffany Pitts, ASC Public Affairs

WRIGHT-PATTERSON AFB, Ohio — For mission-related manikin research and development, the Air Force is teaming with a local firm.

A Cooperative Research and Development Agreement (CRADA) has been signed between the Air Force Research Laboratory Human Effectiveness Directorate and Veridian Engineering, Inc., Dayton, Ohio.

Helping to perform manikin research, development, integration and testing functions for third party clients including commercial firms, military organizations, academic institutions, and other governments, this CRADA will facilitate retention and potential workforce expansion, said Scott Hall, technology transfer manager.

"The Air Force will benefit by acquiring data and information regarding new developments in technical areas that are applicable to its mission," Hall said.

In the 1950s, implementation of the Grumman-Alderson Research Dummy (GARD) manikin was used for ejection seat testing. According to Hall, that testing program initiated the need for a more biofidelic representation of the human body—biofidelic meaning an accurate representation of human biocharacteristics.

An Advanced Dynamic Anthropomorphic Manikin (ADAM), a highly instrumented manikin, was designed to replicate the static and dynamic physical characteristics of the human body during potentially dangerous conditions. It is capable of measuring and recording the manikin responses in tests such as—experimental parachute, helicopter seat crash worthiness, tracked vehicle, consumer vehicle crashworthiness and emergency aircraft escape system.

"The Air Force has utilized and continues to use ADAM and other similar manikins to test ejection seats and human response in other highly dynamic, potentially dangerous situations," said Hall.

This CRADA will not only benefit the Air Force, but other Department of Defense agencies as well as commercial entities (such as the automotive industry) who have been and are currently using manikins in safety-related research and testing, according to Hall. **@**